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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

JUL - 2 1992

In the Matter of )

)  
Amendment of Parts 2, 21, 25 and 94 )  
of the Commission's Rules to )  
Accommodate Common Carrier )  
and Private Op-Fixed Microwave )  
Systems in Bands Above 3 GHz )

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

RM-8004

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FILE

MCI COMMENTS

MCI Telecommunications Corporation ("MCI"), pursuant to Section 1.405 of the Commission's Rules, 47 C.F.R. Section 1.405 (1991), submits its initial statement concerning the Petition for Rulemaking ("Petition") filed by Alcatel Network Systems, Inc. ("Alcatel") on May 22, 1992.

I. BACKGROUND

Alcatel states that its Petition was prompted by the Commission's Notice of Proposed Rulemaking ("NPRM"), 7 FCC Rcd 1542 (ET Docket No. 92-9) (released February 7, 1992).<sup>1/</sup> In the NPRM the Commission proposed to reallocate a portion of the spectrum between 1.85 and 2.20 GHz for emerging telecommunications technologies. The Commission further proposed to relocate fixed microwave users currently occupying the 2 GHz bands to bands above 3 GHz, or to alternative media, in a manner which would result in minimum disruption to their operations.

<sup>1/</sup> MCI and more than 100 other parties filed comments in response to this NPRM. While MCI generally supports the Commission's intent to provide for the development of new technologies, MCI emphasizes that support of existing fixed microwave services must be preserved during the process. MCI believes that the Commission must adopt specific rules to govern provision of service in other bands that are compatible with current operations.

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The Commission expressed its belief that this can best be accomplished through the "use of a flexible negotiations approach that permits financial arrangements between incumbents and new service providers during an extended transition period."<sup>2/</sup> Specifically, the Commission proposed to allow currently licensed 2 GHz fixed licensees to continue to occupy these frequencies on a co-primary basis with new services for a fixed period of time. If, after the transition period, new services were not able to use the spectrum because of interference from fixed microwave systems, those fixed microwave systems would be required to eliminate the interference, negotiate an arrangement for continued operation with the new service operator, or cease operation.<sup>3/</sup> Finally, the Commission proposed to exempt state and local government facilities from any mandatory transition period.<sup>4/</sup>

## II. POSITION OF ALCATEL

Alcatel argues that the Commission's proposal to grant existing 2 GHz microwave licensees a "blanket waiver" of eligibility requirements in higher bands is likely to lead to inefficient use of the spectrum, and urges the adoption of specific rules to ensure efficient use of the spectrum. According to Alcatel, such rules should include

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<sup>2/</sup> NPRM at para. 1.

<sup>3/</sup> Id. at para. 24.

<sup>4/</sup> Id.

provision for co-primary use of all available bands by private op-fixed and common carriers, eligibility, band channelization, modulation efficiency standards and minimal channel loading requirements, minimum path length requirements, frequency coordination criteria, and antenna standards.

Petition at 2. Alcatel urges the Commission to initiate a rulemaking proceeding in order to provide the public an opportunity to "assess the reallocation based upon all relevant information regarding full implementation."<sup>5/</sup>

Alcatel proposes that the Commission adopt the following proposals to ensure the continued availability of fixed microwave services and to optimize spectral efficiency:

- (1) Reallocate the 3.6-3.7 GHz band to permit both private operational-fixed users and common carriers to establish point-to-point links on a co-primary basis;
- (2) Reallocate the point-to-multipoint portion of the 10.55-10.68 GHz band to permit point-to-point use by both private operational-fixed users and common carriers on a co-primary basis;
- (3) Reallocate the following bands to permit use by both private operational-fixed users and common carriers on a co-primary basis:

4 GHz (3.7-4.2 GHz)  
Lower 6 GHz (5.925-6.425 GHz)  
Upper 6 GHz (6.525-6.875 GHz)  
11 GHz (10.7-11.7 GHz); and

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<sup>5/</sup> Id. at p. 24. In many respects, Alcatel's petition is similar to a petition filed on March 31, 1992 by the Utilities Telecommunications Council ("UTC"). In its petition, UTC urged the Commission to defer action in ET Docket No. 92-9 and to initiate a separate rulemaking to specifically consider amendments to technical and coordination rules related to the accommodation of existing 2 GHz systems, as well as new or modified systems, in bands above 3 GHz. Alcatel, unlike UTC, proposes specific rule amendments.

(4) Adopt specific rule changes to Parts 2, 21, 25 and 94, which would:

- effectuate such proposed reallocations;
- define eligibility;
- prescribe band channelization, minimum path lengths, minimum channel loading, and minimum capacity for bandwidth used;
- establish frequency coordination criteria; and
- establish antenna standards.

Petition at 3-4.

#### IV. DISCUSSION

MCI currently operates approximately 275 fixed point-to-point microwave paths in the 4 GHz common carrier band, 225 paths in the 6 GHz band, and 100 paths in the 11 GHz band. Ongoing expansion of MCI's fixed point-to-point microwave network (through both the addition of frequencies to existing paths and the construction of new paths) is an integral part of the overall MCI network development. Accordingly, MCI has a direct and substantial interest in ensuring that adequate frequencies remain available for fixed common carrier microwave paths.

MCI agrees in principle with Alcatel's recommendation that specific channelization plans be established in those bands where spectrum will be shared among various services and bandwidths. Otherwise, licensing of a few widely-spaced, narrow-bandwidth channels (as would be possible under the Commission's "blanket waiver" approach) might well eliminate the possibility of adding or expanding any wide-bandwidth channels in the same band segment. Appropriate channelization plans will allow for an orderly and spectrally efficient development of each frequency band.

MCI believes that frequency bands should be shared between compatible bandwidths only. Sharing of a band segment among numerous bandwidths, ranging from 40 kHz and 30 MHz, would not lead to efficient spectrum use. Wider bandwidths are capable of handling higher traffic loads and can, therefore, be economically justified at greater equipment and construction costs. Systems that use multiple pairs of wide bandwidth, high channel capacity frequency pairs (typically common carrier systems) provide for extensive frequency reuse and very efficient spectrum utilization. They need logical sequences of frequencies for growth over time. Single frequency, narrow bandwidth microwave paths (typically licensed as private operational-fixed microwave facilities) are built at lower cost. In many cases, these narrow-bandwidth systems emphasize performance, at the expense of adjacent channel filtering and off-axis antenna discrimination, especially in rural and remote areas where future growth and network expansion are considered unlikely.

MCI has decommissioned a number of microwave paths and routes in the last several years. Most of these were in areas where the analog microwave technology needed to be upgraded. In each case, MCI has weighed its alternatives: upgrading to digital microwave technology or replacing the path with a fiber optic system. In areas where the required traffic loading could not economically utilize the tremendous capacity of fiber optic facilities, microwave systems remain and continue to be expanded. Where fiber optic technology is justified, market forces dictate that it be

deployed. The need for wide-bandwidth common carrier systems remains strong; adequate frequency allocations must be maintained.

Even though Alcatel characterizes its proposal as a "win-win" situation for both common carriers and private users, MCI believes that common carriers and others may be substantially disadvantaged if Alcatel's proposal is adopted. Common carriers now have 2070 MHz available on an exclusive basis; they would share 2580 MHz with other users on a co-primary basis under Alcatel's proposal. Satellite receive stations, which currently occupy 500 MHz of spectrum in the C-band, would lose 80 MHz under Alcatel's proposal. Both of these classes of users will suffer a loss in frequency availability. Because the non-government 4, 6 and 11 GHz bands in question are already congested, any rules requiring further sharing of these band is likely to yield a net zero: the tremendous increase in spectrum available to private users must come at the expense of common carriers and satellite C-band users.

If under-utilized bands are added to the pool subject to sharing, however, some net gain could be expected. The Alcatel proposal to add the 3.6-3.7 GHz band is a move in the right direction. MCI recommends that the Commission, in cooperation with NTIA, identify any other bands in the 3-11 GHz range currently being used for non-classified government systems and consider making those additional frequencies available for use on a shared basis by common carrier and private operational-fixed licensees.

The bandwidth allocations proposed by Alcatel appear to be structured around its current product line. MCI supports the

initiation of a rulemaking because all microwave equipment manufacturers and other interested parties should be given an opportunity to identify the bandwidths of current microwave products,<sup>6/</sup> as well as those in development, and to comment on technology trends and future needs.

MCI agrees with Alcatel's assertion that the antenna pattern standards in the current Commission rules are obsolete. Currently available antennas far exceed the Standard A patterns in most bands. Frequency reuse and spectrum utilization could be improved by changing the Commission antenna standards to meet the current technology, especially in the wide bandwidth, high capacity bands where they are already in widespread use. Further consideration should be given to completely eliminating the Standard B patterns and making Standard A the minimum requirement for new installations.

#### V. CONCLUSION

Although MCI believes that the rules ultimately adopted by the Commission may differ in some important respects from those proposed by Alcatel, MCI agrees with the main thrust of Alcatel's petition. If the Commission intends to move forward with the reallocation of the 2 GHz bands for emerging technologies, it should revise its current rules governing channelization, bandwidth

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<sup>6/</sup> MCI notes that Alcatel suggests that the 40 MHz bandwidth is obsolete. However, another manufacturer has recently introduced a SONET-compatible 4 GHz radio with 40 MHz bandwidth and six DS3 capacity (actually six STS-1 capacity).

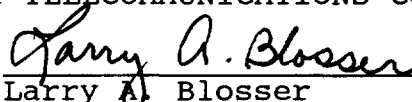
allocation and technical standards in the higher bands, to provide for orderly and efficient use of the spectrum. The need for appropriate rule changes is especially great where different classes of users and different bandwidths are to be commingled.

MCI believes the Commission should promptly issue a notice of proposed rulemaking seeking further comment concerning band sharing, channelization, bandwidth allocations, and technical standards for the higher microwave bands. The views of all interested parties should be taken into account. It is important that these rule changes be made well in advance of any relocation of existing microwave facilities which may be required by the Commission in the emerging technologies proceeding, ET Docket No. 92-9. Unrestricted relocation of 2 GHz microwave paths into higher frequency bands pursuant to the "blanket waiver" currently envisioned by the Commission would result in inefficient spectrum utilization, contrary to the public interest. As explained above and in Alcatel's petition, the adoption of appropriate channelization plans, band sharing arrangements and other related technical rules will result in greater spectrum efficiency, which would clearly serve the public interest.

Respectfully submitted,

MCI TELECOMMUNICATIONS CORPORATION

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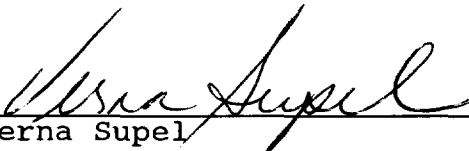


CERTIFICATE OF SERVICE

I, Verna Supel, do hereby certify that copies of the foregoing "MCI Comments" were served by first class mail, postage prepaid (unless otherwise indicated) on the following parties this 2nd day of July, 1992:

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